THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today
(1) was not written for publication in a law journal and
(2) is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ZAEV SHARABY

Appeal No. 94-2078
Application 07/834,755[1]

ON BRIEF

Before GARRIS, WEIFFENBACH and WARREN, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal and Opinion

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 12 through 15 and 28 through 32.[2,3] Claims 16 through 22 are also of record and have been withdrawn from consideration by the examiner as directed to a nonelected invention.

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[1] Application for patent filed February 12, 1992. According to appellant, this application is a division of application 07/509,687 ('687 application), filed April 16, 1990, now U.S. Patent No. 5,112,522, issued May 12, 1992, which is a division of application 06/854,203 ('203 application), filed April 21, 1986, now U.S. Patent No. 4,918,151, issued April 17, 1990, which is a continuation-in-part of application 06/660,180, filed October 12, 1984, now abandoned.

[2] See, e.g., specification, pages 18-19, and the amendment of October 19, 1992 (Paper No. 5).

[3] While the claims on appeal were stated as "[c]laims 15-18 and 28-32" in the brief (Paper No. 9, page 1), we note that the notice of appeal of April 16, 1993 (Paper No. 8) correctly identifies the

We have carefully considered the record before us, and based thereon, find that we cannot sustain either of the grounds of rejection under 35 U.S.C. § 103 set forth by the examiner in his answer (Paper No. 10,[4] pages 3-4). It is well settled that the examiner may satisfy his burden of establishing a *prima facie* case of obviousness under § 103 by showing some objective teachings or suggestions in the prior art taken as a whole or that knowledge generally available to one of ordinary skill in the art would have led that person to arrive at the claimed invention as a whole, including each and every limitation of the claims, without recourse to the teachings in appellant's disclosure. *See generally In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *In re Dow Chem. Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531-32 (Fed. Cir. 1988); *In re Warner*, 379 F.2d 1011, 1014-17, 154 USPQ 173, 176-78 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). We cannot conclude that the examiner has carried his burden in the case before us.

We have construed appealed claim 12 to require that in an aqueous suspension process for producing copolymers of vinyl chloride and vinyl esters of fatty acids, wherein the acid portion contains from 4 to 26 carbon atoms, at least 0.25 part by weight of at least one mercaptan chain transfer agent is admixed with an encapsulating amount of a vinyl ester of fatty acids and the encapsulated mixture so formed is then added to the polymerization medium prior to the start of polymerization. This construction is consistent with the broadest reasonable interpretation of the terms of this claim consistent with appellant's specification as it would be interpreted by one of ordinary skill in this art. *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319**,** 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). We note in this respect that the term "encapsulation" does not have its ordinary meaning as appellant intends that this term is to be used in the sense of "encapsulation, complexation or interaction" to define the formation of a "homogenous system" between the vinyl ester of fatty acids and the mercaptan chain transfer agents (specification, page 10, line 20, to page 11, line 5). *See, e.g., Morris, supra; York Prods., Inc. v. Central Tractor Farm & Family Ct.*, 99 F.3d 1568, 1572-73, 40 USPQ2d 1619, 1622 (Fed. Cir. 1996), and cases cited therein (a claim term will be given its

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finally rejected claims as claims 12-15 and 28-32 and appellant submits argument based on appealed claim 12 in the brief.

ordinary meaning unless appellant discloses a novel use of that term); *Zletz, supra* ("During patent prosecution the pending claims must be interpreted as broadly as their terms reasonably allow. When the applicant states the meaning that the claim terms are intended to have, the claims are examined with that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art."). The transitional term "comprising" used in the "improvement" clause merely specifies in this instance that the improvement includes at least the step of forming the encapsulated mixture with a vinyl ester of fatty acids and the mercaptan transfer agents *per se* followed by the step of adding or mixing the encapsulated mixture with any other ingredients of the polymerization medium prior to the start of polymerization *per se* (see specification, e.g., page 12, lines 3-7). *See Exxon Chemical Patents Inc. v. Lubrizol Corp.*, 64 F.3d 1553, 1555, 35 USPQ2d 1801, 1802 (Fed. Cir. 1995).

We have compared appealed claim 12 as we have construed it above, with Kuwata[5] taken alone or combined with Chujo or with Uraneck. In doing so, we are led to the same teachings of Kuwata as cited by a prior panel of this board in Appeal No. 88-2158 in the grandparent '203 application (Paper No. 17; *see supra* note 1) in considering the invention of appealed claim 1 therein which involved an "aqueous polymerization" process to obtain "copolymers of vinyl or vinylidene halides and vinyl esters of fatty acids" wherein "the mercaptan is admixed with said vinyl esters before adding said mercaptan to the polymerization medium, and wherein [as little as 0.03 part by weight] of said mercaptan is added in the form of a mixture with vinyl ester to the polymerization medium prior to the start of the polymerization reaction" (decision, pages 1-2). That panel found that certain disclosure of Kuwata[6] "fairly suggests adding the mercapto chain regulator to the polymerization medium in the form of a mixture containing the vinyl ester monomer" and thus concluded that the act of "[c]ombining the mercaptan with the vinyl ester monomer, *etc.*, prior to initiating polymerization" renders the therein claimed invention obvious since the "vinyl ester and mercaptan of Kuwata are clearly 'mixed together' prior to initiating

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[4] The answer is marked as "Paper No. 10" but is record in the file "contents" as "Paper No. 11."
[5] Kuwata and other references relied on by the examiner with respect to the grounds of rejection are listed at page 2 of the answer. We refer to these references in our opinion by the name associated therewith by the examiner.
[6] See Kuwata, col. 11, lines 25-30, col. 12, lines 23-32 and col. 13, lines 43-55.

polymerization" and "simply varying the order of addition of materials to a reactor lies well within the skill of the art and is not ordinarily patentable" (page 3, emphasis ours).

We observe that the processes of appealed claim 12 before us and appealed claim 1 in the '203 application differ in that appealed claim 12 clearly specifies that the mercaptan chain transfer agent is "admixed" with "an encapsulating amount" of a vinyl ester of fatty acids and the "encapsulated mixture" so formed is then added to the suspension polymerization medium while appealed claim 1 of the grandparent application merely specified that at least 0.03 part by weight of the "mercaptan is added in the *form of a mixture* with vinyl ester to the polymerization medium" (emphasis added) without limitation as to the content or nature of the "mixture" which can be used for either suspension or emulsion polymerization (specification, page 4, lines 7-13).

We have carefully considered the teachings of Kuwata identified by the prior panel with respect to the invention as claimed before us and find that we agree with appellant that there is no direction in this reference which would have led one of ordinary skill in this art to "encapsulate," as that term is employed by appellant in appealed claim 12, the mercaptan transfer agents in a vinyl ester of fatty acids, wherein the acid has at least 4 carbon atoms, prior to incorporating such an admixture with other components of the aqueous suspension polymerization medium prior to the start of polymerization. In the teachings of Kuwata identified by the prior panel, the entire amount of the mercaptan to be employed is added to the suspension polymerization medium, which contains vinyl chloride as the *sole* monomer, *prior* to the start of polymerization. In Kuwata Example 33 (Table V), the mercaptan is added *alone* to the polymerization mixture while in Kuwata Examples 36 (Table VI) and 39 (Table VII), the mercaptan is added *together* with all of the other ingredients. We observe that these reference examples are "controls" and thus are intended to contrast the "delayed addition" of the mercaptan chain transfer agents taught in the reference to be the solution to the problem of the formation of coarse particles in suspension polymerization (col. 3, line 47, to col. 4, line 49). As pointed out by appellant in his reply brief (pages 3-4), in the disclosed "delayed addition" of the mercaptan chain transfer agents according to the invention set forth in Kuwata, the mercaptan is always added *alone* to the polymerization medium regardless of the stage of the polymerization reaction at which all or a portion of the mercaptan is added. Furthermore, on the record before us, the disclosure of "vinyl

esters, such as vinyl acetate," as one type of monomer which is copolymerizable with vinyl chloride in Kuwata (col. 5, lines 9-10), would not have reasonably suggested to one of ordinary skill in this art that the manner of addition of the mercaptan with other ingredients to form an aqueous suspension polymerization medium which will contain vinyl chloride and vinyl acetate as comonomers would, indeed, change. Kuwata does not disclose *any* higher homologues of vinyl acetate, which comonomer has two carbon atoms in the acid moiety.

Accordingly, in considering the teachings of Kuwata as a whole, we must conclude that while this reference discloses the addition of all or part of the amount of the mercaptan chain transfer agent to be used in the polymerization reaction prior to the start of polymerization to one of ordinary skill in this art, there is no direction or suggestion therein to such person to "encapsulate" at least a portion of the mercaptan to be used in the reaction in an "encapsulating amount" of a vinyl ester of fatty acids, having 4 to 26 carbon atoms in the acid moiety, prior to combining these two admixed ingredients with any or all other aqueous suspension polymerization medium ingredients. We find no teachings which would bridge the apparent gap between the claimed invention before us and the teachings in Kuwata in either Chujo or Uraneck. We find that Chujo adds all of the *bulk* polymerization ingredients *together* including the mercaptan chain transfer agent and does not disclose any higher homologues of vinyl propionate, which comonomer has three carbon atoms in the acid moiety (e.g., col. 1, lines 66-67, col. 2, lines 44-46), while Uraneck mixes *together* a number of *emulsion* polymerization ingredients which can include "a polymerizable monomer" and does not disclose any higher homologues of vinyl acetate (e.g., col. 1, lines 54-59, col. 2, lines 48-53, col. 8, line 22). No other evidence of knowledge in the art or scientific reasoning has been adduced on the record by the examiner (answer, pages 3-4; supplemental answer, Paper No. 15, page 1).

Accordingly, the record before us supports the inference that the examiner has relied on information gleaned from appellant's disclosure in formulating the grounds of rejection on appeal. *Dow Chemical*, *supra*; *Warner*, *supra*.

The examiner's decision is reversed.

REVERSED

BRADLEY R. GARRIS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
CAMERON WEIFFENBACH	)	BOARD OF PATENT
Administrative Patent Judge	)	APPEALS AND
	)	INTERFERENCES
	)	
	)	
CHARLES F. WARREN	)	
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